

An Essay on

Haemoptysis

For the degree of M.D.

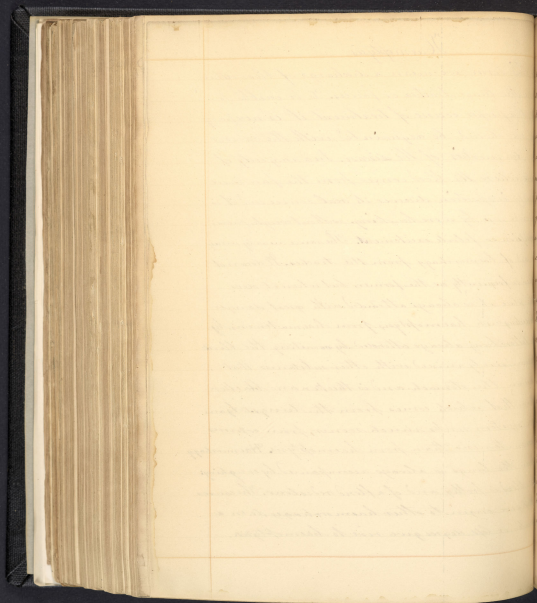
By William J. Scott of Virginia

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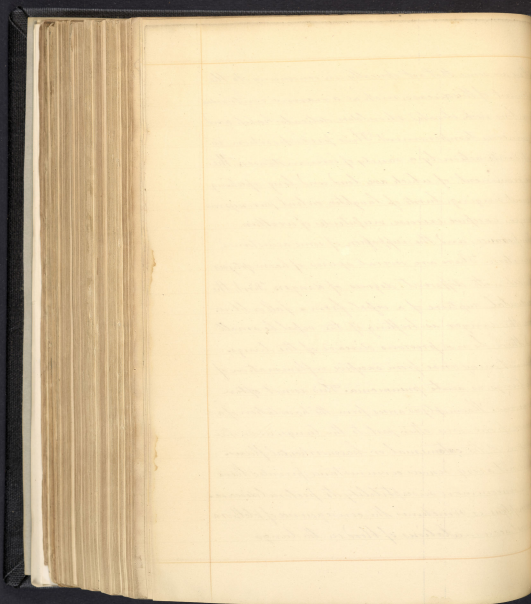
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ⁿ Haemoptysis

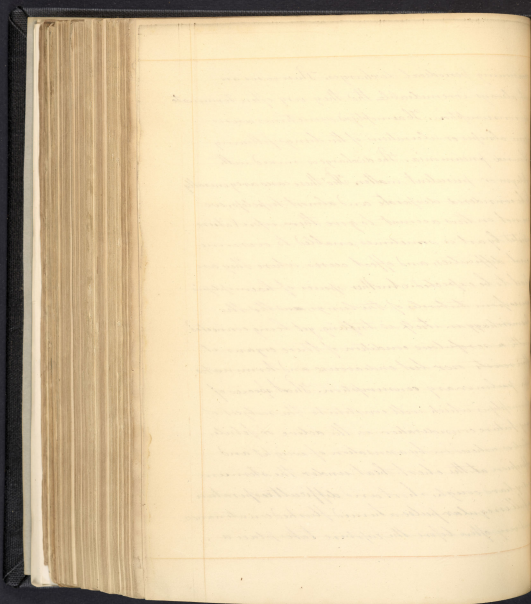
By this term we mean a discharge of blood either from the lungs trachea or fauces. To be enabled to adopt a proper course of treatment it is necessary that we should be acquainted with the causes and diagnostics of the disease. In a majority of cases where the blood comes from the fauces we can by inspection discover its real source and it is thrown up by mere hawking, without cough, pain, oppression or febrile excitement. The same nearly may be said of haemorrhage from the trachea. It does not occur so frequently as the former, but when it does take place it is always attended with great danger. We distinguish haemoptysis from haematemesis, by the latter being always attended by vomiting. The blood is uniformly mixed with other substances that were in the stomach, and is thicker and blacker than that which comes from the lungs. Again the system sinks much sooner, from copious haematemesis than from haemoptysis. Haemorrhage from the lungs is always accompanied by coughing, the blood is frothy, and of a florid red colour. The causes that give origin to other haemorrhages do in a greater or less degree give rise to haemoptysis.



but there are some that act specially in conducing to the
production of this disease, such as a narrow contracted
thorax, long neck, elevated shoulders, delicate habit, and
sanguineous temperament. This predisposition is
excited into action by a variety of circumstances, the
more prominent of which are, loud and long speaking,
frequent singing, bursts of laughter, violent paroxysms
of anger, excessive exercise, vicissitudes of weather
intemperance, and the suppression of some accustomed
evacuation. There are several species of haemoptysis
attended with different degrees of danger. First, the
accidental rupture of a vessel, from a fall or blow.
Here the danger is trifling if the vessel be small
and there be no previous disease of the lungs.
Again it may arise from excessive inflammation of
the lungs, as acute pneumonia. This is not often
dangerous. Haemoptysis arises from the translation of a
disease from some other part to the lungs, as in the
suppression of the catamenial or haemorrhoidal fluxes.
This is not a very serious circumstance provided there
be no uncommon susceptibility to pectoral diseases.
Haemoptysis is sometimes the consequence of plethora
or vast accumulations of blood in the lungs.



occasioning periodical discharges. These cases are
not always irremediable tho' they very often terminate
in consumption. The hæmoptysis sometimes arises
from abscess or ulcerations of the lungs following
illured pneumonia. The discharge is mixed with
phlegm or purulent matter. Tho' these cases are generally
to be considered desperate and almost hopeless, we
are not on this account to give them up. Nature
assisted by art is sometimes enabled to overcome
great difficulties, and effect cures where they are
least to be expected. Another species of hæmoptysis
arises from tubercles of the lungs, and tho' the
hæmorrhage in itself is trifling, yet being connected
with a scrofulous condition of these organs it
often resists our best endeavours and terminates
in pulmonary consumption. That species of
hæmoptysis which will constitute the subject of
my future consideration is the active or febrile,
which is ushered in by a sensation of weight and
oppression at the chest, heat under the sternum,
a dry hard cough, short and difficult respiration,
a full irregular pulse, a burning flushed countenance
and very often before the eruption takes place a



saturnine taste is perceived in the mouth. Occasionally
the case puts on stronger marks of febrile action
being attended by chills, pains in the back and
tense flatulency, constipation, sleepitude and ~~debility~~
Immediately before the appearance of the blood, a degree
of irritation is felt at the top of larynx. To relieve
this a hawking is made which brings up a little
blood of a fluid colour, and somewhat frothy.
The irritation returns and in like manner, more
blood of the same kind is brought up, with
some noise in the windpipe as of air passing
through a fluid. Haemoptysis very often takes
place during the night while the patient is asleep
and free from all mental or corporal agitation.
This has never been satisfactorily accounted for.
The phenomenon may I conceive be readily accounted
for from the following considerations. When
a person is in a natural sleep all parts of the
body except the lungs are at rest. The contractions
and relaxations of the muscles seem in a great
degree necessary for carrying on an active circulation,
these being absent it is very presumable that
a languid circulation will follow. The

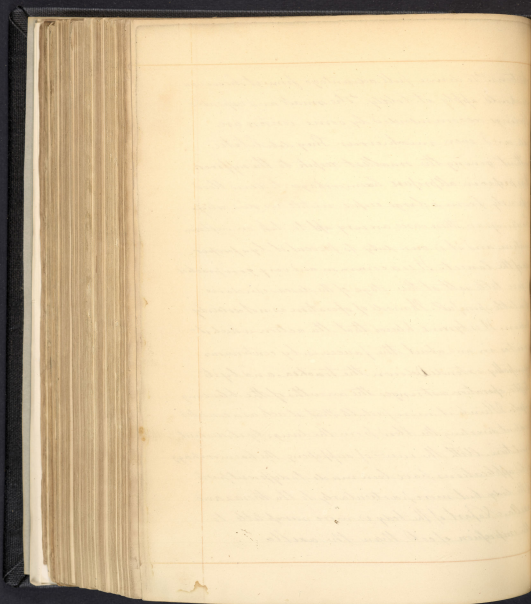
palenep of a person asleep very plainly proves that
the blood is confined more to the large vessels
than during the day when he is awake.
The brain is another source from which I derive
assistance in endeavouring to explain this
phenomenon. I have no doubt that during sleep
the vessels of the brain are considerably emptied,
and that this condition is absolutely necessary
for sleep to take place. Nothing more is wanting
to account for the difficulty of falling asleep
when there is unnatural determination
of blood to the head. The delirium in low fever
which very much resembles sleep is accounted for
in this way. It also affords an easy explanation
of the *Modus Operandi* of opium in these
cases. All these circumstances taken into consideration
together with the absence of the senses warrant
the conclusion, that the lungs in their predisposed
or perhaps already diseased condition become a
centre of fluxion. The superabundance of blood
which is derived from its deficit in almost
every other part of the body is directed with
peculiar force to the lungs from their continual

action their diseased condition, and posture of the body, thus giving rise to immense accumulations of blood in those organs, which causes so much uneasiness and difficulty of respiration, that the patient awakes jumps up in bed frightened with the apprehension of suffocation. By this exertion the blood is aroused from its inactivity and in its endeavour to recede from its encroachments or from pressure caused by the strong and hurried inspirations which the patient is certain to make, the already distended and weakened vessels give way followed by all those phenomena which have already been described.

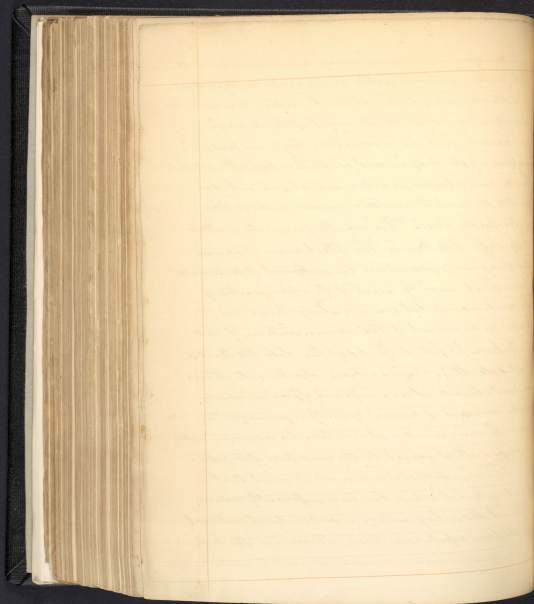
Treatment

The most obvious indication in the treatment of this is to put a stop to the hæmorrhage. For this purpose venesection is the best remedy. The propriety of venesection in hæmoptysis has been denied by a very celebrated practitioner of London. Dr Herberden. His arguments tho' plausible and ingenious are by no means satisfactory. In fact the efficacy of the practice is sufficient reputation to his

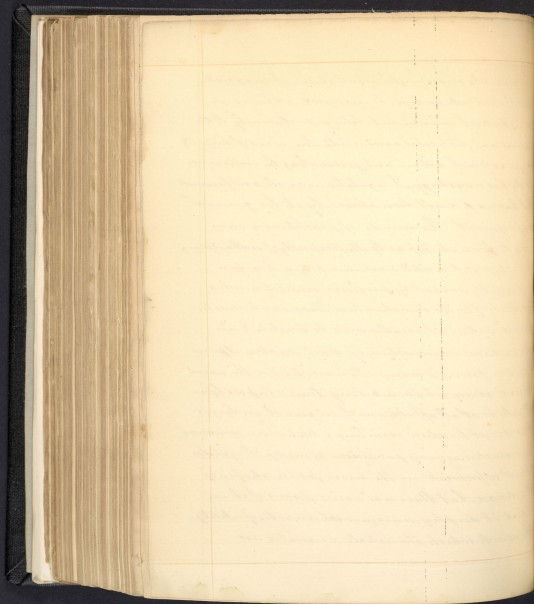
objections. To derive full advantage from it - however
we should apply it boldly. The small and repeated
bleedings recommended by some writers are,
idle and even mischievous. They debilitate
without giving the smallest respite to the sufferer.
It is proper in all profuse hæmorrhage to draw blood
copiously from a large orifice until we give relief.
The lungs in these cases are very apt to take on inflam-
mation and it is our duty to prevent it by a proper
use of the lancet. It is a common and very good practice
to give table salt at this stage of the disease, in doses
of a table spoonfull. The mode of operation is not certainly
known. It is by some believed that the action which it
excites in and about the fauces, is, by continuous
sympathy extended down the trachea, and by its
styptic operation astringes the mouths of the bleeding
vessels. I think it more probable that it acts as a counter-
irritant diverting the blood from the lungs by its distant
irritation. With the view of stopping the hæmorrhage
cold applications have been made to different parts
of the body but more particularly to the thorax and
axilla. No part of the body is more susceptible to
the impression of cold than the axilla



Cloth wetted with cold water or vinegar, or ice enclosed
in a bladder should be applied to axilla. These are
important remedies in the onset of the disease
and should not be overlooked. By some practitioners
scrapping up the body in wet cloths has been recommended.
This is an antiseptic practice and should not be
resorted to until milder measures have been
ineffectually tried. This was the favourite practice
of the late Dr Bond. The Saccharum Saturni
has been justly praised in the treatment of this disease.
It was first used by some of the older writers of
the continent, but was for a long time laid
aside on account of the denunciation of Sir
J. Baker. It fell to the lot of the late Dr Barton
to disprove these false and idle objections to its use
and establish it as a safe and efficacious remedy
in the treatment of hæmoptysis. As generally the
case with new remedies it has been too indiscriminately
employed without regard to the condition of the pulse.
It is now an established rule never to resort to it
until arterial action has been sufficiently reduced.
We must hold as long as there is preternatural excitement
in the blood vessels and then throw in the lead



It is generally given in too small doses, it may with safety and advantage be increased. Alum is an important remedy, but belongs exclusively to the reduced and protracted cases, with the view of keeping down arterial action and preventing the recurrence of the hæmorrhage. Digitalis is an old and favorite but has not, I doubt been abused by its too general employment. The minds of practitioners seem now to be made up as to the propriety of withholding its employment until vascular action has been sufficiently reduced by previous venesection. As a substitute for the lancet, where there exists much arterial action it should never be trusted. Even after we have subdued action by direct depletion it proves much inferior to many other articles. In the usual mode of administration, a long time elapses before the pulse is at all affected, and if we give it in larger doses it is apt to induce vomiting, which is an equivocal and sometimes very pernicious remedy. Digitalis is not appropriate in the more febrile stages of the disease, but there are some forms of it, in which it displays unequivocal marks of utility. The cases to which the article is suited are



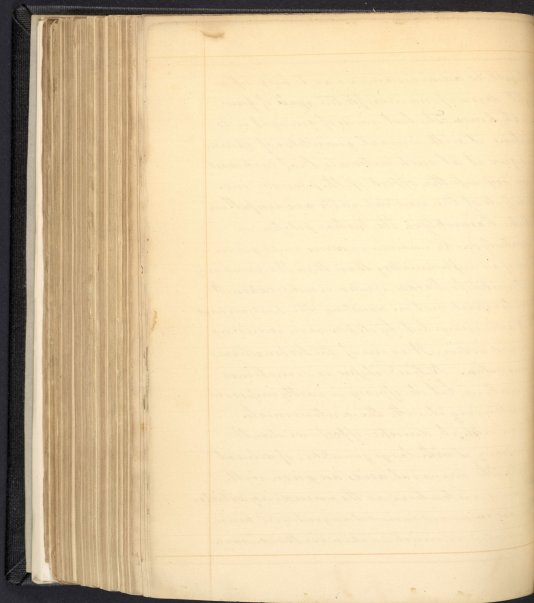
mastered by a slight oozing of blood, a hacking
cough, pain in the side and breast with a quick
and sometimes active pulse with great mobility
and weakness of the system. The blood in these
cases would be hazardous in the extreme and
it is here that we should substitute digitalis
for the lancet. Exhibited here so as to keep the pulse
down to its natural standard, it displays
certain and important effects. Emetics were introduced
in the treatment of this disease, sixty or seventy
years ago, by Brian Robinson of Dublin and tho'
highly recommended by him they have been
for a long time laid aside on account of the
unfavourable reports of Dr Bullen. Emetics
however, are sometimes usefull in arresting
haemorrhage from the lungs. Spontaneous
vomiting has often effected it, and may even
sometimes effect the same thing, by artificially
inducing that operation. Instances are not wanting
to justify the expectation. Dr Chapman declares that in
the most alarming case he ever saw, the discharge
was entirely arrested by the exhibition of a dose
of digitalis which pulsed violently. Although

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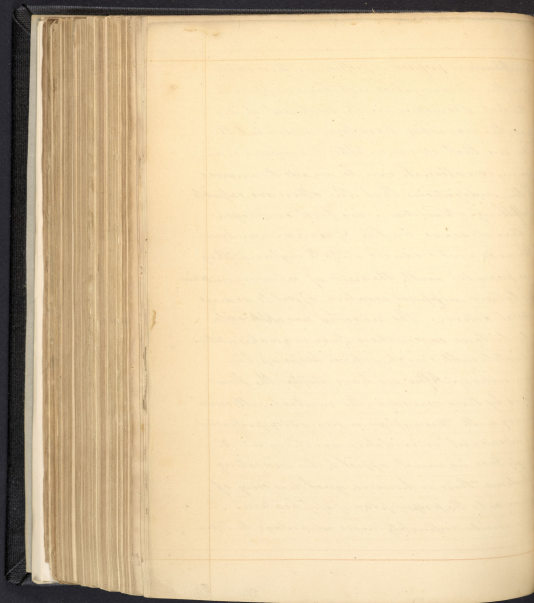
eminently usefull in some desperate cases, yet
the emetic practice is exceedingly dangerous
and should not be resorted to until all other
milder measures have failed, and more
especially if a large vessel has been ruptured.
But should there be only a slight raising of blood
arising from tubercles or anastomosis, the
remedy is perfectly safe and sometimes
preeminently usefull. It diffuses the blood
equally over the body, removes cutaneous
constriction, calms the disturbed state of
the system, and lessens the anxiety cough,
haemorrhages, expectoration, and difficulty
of respiration. The emetic tartar is perhaps
the best article for the purpose, but more
particularly as a nauseant in the febrile
cases. The iusculic solution has been highly
recommended by Morely and Barton.
This medicine has not been extensively enough
employed to decide upon its comparative merits.
Guaiacum is a remedy of far less doubtfull character
it has been used in numerous and diversified
cases, and always with beneficial results.

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It should be administered so as to keep up a
slight degree of nausea, for the space of from
12 to 24 hours. The best mode of giving it is to
combine it with small quantities of opium
and give it at such intervals that each dose
may keep up the effect of the previous one.
The whole of the neutral salts are useful in
febrile haemoptysis the nitras potassae is
particularly so. No medicine is more employed in
fevers of an inflammatory than this. It is peculiarly
well suited to the case under consideration. It
proves beneficial not in arresting the haemorrhage
by its astringency but by its power in reducing
vascular action. It is one of the best auxiliaries
to venesection. Nitras Potassae is sometimes
given alone, but its efficacy is vastly improved
by combining it with the antimonial. When we wish its diuretic effect we should
accompany it with large quantities of diluent
drinks. The mineral acids are given with
the same intention as the preceding article.
They are considered more astringent, and hence
we resort to much earlier in the disease.



The sulphuric is preferred is preferred in those cases where the bleeding has not been stopped. To the list of remedies in the treatment of this disease the narcotics have been added but the only one that seems entitled to confidence is opium, or rather, it can be made to answer all the indications that the others are capable of fulfilling. Narcotics were first employed in this disease by the Germans, and were afterwards introduced into England. They were prescribed with the view of calming irritation and by their supposed sedative effect to reduce arterial action. The narcotics are applicable only to those cases where there is great irritation and intolerable cough, which keeps up the haemorrhage. After we have stopped the flow of blood by these remedies, the neutral salts come in very well. Haemoptoe is frequently protracted and dependant on irritation existing in the lungs. Here we must appeal to the vesicating applications. There is however, great diversity of opinion as to the proper place of application. Some ascribe infinitely more advantage to them



when applied to the extremities. Others prefer them to the back of the neck. But we should here as in all other cases, unless we wish them to act by revulsion apply them immediately over the seat of the disease. In fact, the efficacy of blisters is always proportionate to their proximity to the seat of the disease. This the operation of blisters in this disease is not very striking, yet we cannot dispense with them. It often happens that cases of this after resisting our best remedies, suddenly yields to the application of a blister. This is the course that has generally been pursued in the management of this disease, but that it should have full effect it is necessary that we should attend to other circumstances. As soon as we are called to a case we should direct the patient to be put to bed with his shoulder and head elevated and his extremities extended. He should never be permitted to double himself up in bed. This posture acts very powerfully in reexciting the haemorrhage. His chamber is to be kept cool by free ventilation. Company must be entirely excluded, and the

patient be directed to talk as little as possible. During the progress of the disease the diet should consist of small quantities of demulcent drinks agreeably acidulated. The patient must not on any account be permitted to load his stomach with either fluid or solid food. The bowels must be kept soluble by the refrigerating purgatives. Haemoptoeis sometimes instead of being marked by fever and high arterial action, is quite the contrary, or as it has been called, passive. These cases are generally connected with a sorofulous condition of the lungs. Whether this be the original condition or not, it is equally proper to prescribe all depletory measures. Our object here is to keep up the tone of the system, and for this purpose we resort to the different tonics.

Of these the peruvian bark is to be preferred. It was a favourite remedy of Dr Rush. It is commonly given alone but its power is very much increased by combining with the preparations of iron and particularly the muriated tincture. Alum and the acetate of lead were favourite remedies of Dr Cullen in this form of

the diseases but they are certainly inferior to the mineral acids. The acids are much better suited to the pale than active forms of hæmoptysis. Hæmoptysis sometimes attends pulmonary consumption, and of all the remedies here, the nitric acid is to be preferred. These remedies should be accompanied with gentle exercise, a nourishing diet, and such drinks as strengthen without heating the system. Malt liquors are preferred and of these old porter is the best. This is the course generally tho' not always successfully pursued in managing this disease. It sometimes fail entirely, either from some peculiarity in the attack or constitution of the patient. The disease is often excited from exposure to the slightest causes and to guard against it with any prospect of success we must inculcate the necessity of observing a regular and abstemious mode of living, avoiding every exciting cause, and particularly catarrhs, than which nothing is so apt to induce a return of the disease. Where the predisposition is very strong the condition of the pulse and lungs are particularly to be attended to.

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Any unusual activity in the blood vessels, or pain or oppression about the chest are symptoms demanding our immediate attention. We should direct small bleedings and a low diet, with an occasional laxative, and where not absolutely objected to a perpetual blister which is sometimes of more benefit than every thing else in obstinate cases. The alterative use of mercury should not be overlooked. When connected with a tubercular condition of the lungs emetics are exceedingly useful as preventives of the hæmorrhage. Cases of hæmoptysis do sometimes occur where the lungs are so very much diseased that our best plans of treatment prove altogether ineffectual.

Here as a last resource we should advise the patient to make a voyage by sea to some warmer climate. Cases of recovery from it are sufficiently numerous and well authenticated to justify us in the measure.

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